MULTIMEDIA UNIVERSITY

STUDENT ID NO | | | | | | | | | | |

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2016/2017

DCS5018 – COMPUTER SYSTEMS AND APPLICATIONS

(DIT & DBIS only)

10 MARCH 2017
9.00 a.m. – 11.00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENT:

1. This Question paper consists of **8 pages** with 2 sections.
2. For **SECTION A**: Answer **ALL** questions on the OMR sheet provided.
3. For **SECTION B**: Answer **ALL** questions in the Answer Booklet provided.

Section A: Multiple Choices Questions (40 marks)

*Instruction: Please mark your answers on the **OMR sheet** provided.*

1. What is the latest type of optical storage to hit the market today?
   A. Digital video discs
   B. Flash memory cards
   C. Blu-ray discs
   D. Compact discs

2. Which of these storage options is considered volatile?
   A. Hard drive
   B. Random Access Memory (RAM)
   C. Read-Only Memory (ROM)
   D. Flash drive

3. Which of the following statement is **TRUE**?
   A. An input device lets you send processed data out of your computer in the form of text, pictures, sounds, or video.
   B. A scanner is a small camera that sits on top of your computer monitor or is built into a laptop, tablet, or smartphone.
   C. Binary language consists of just two digits: 0 and 1.
   D. A netbook is a full-featured but lightweight laptop computer designed to compete with the MacBook Air.

4. What are the four major functions of a computer?
   A. Input, process, output, and storage.
   B. Input, process, data, and storage.
   C. Input, process, output, and hardware.
   D. Information, process, output, and storage.

5. _____ is the largest computer network in the world.
   A. The Internet
   B. The World Wide Web
   C. Client/server
   D. ARPANET

6. What are the parts of a URL?
   A. Protocol, domain name, and path.
   B. Path, host, and protocol.
   C. Host, protocol, and domain name.
   D. Protocol, server, and path.

7. _____ is a software that enables you to display and interact with text and other media on the web.
   A. Web server
   B. Web browser
   C. Search engine
   D. Client

Continued...

8. What is the underlined part of the URL below?

https://www.mmu.edu.my/community/academic-calendar/

A. protocol
B. subdirectory
C. domain name
D. link

9. All of the following statements are true about proprietary software **EXCEPT:**
A. Proprietary software is also known as Assets software.
B. You can buy and download proprietary software directly from the Internet or buy it on a DVD.
C. Buying a proprietary software means buying its software license.
D. MS Office is one of the proprietary software example.

10.

- Can use the software over the Internet without having to install it on your computer.
- User can share their documents and collaborate online with others, avoiding the coordination mess that often occurs when transferring documents via e-mail.

The above statements are best referring to:
A. Productivity software
B. Open source software
C. Beta software
D. Software as a Service (SaaS)

11. Specialized business software is also known as _____.
A. expert business software
B. commercial business software
C. horizontal market software
D. vertical market software

12. A lecturer wants to write a small program to sort the grades in her grade book in descending order and next is to highlight grades that add up to less than a C average. Suggest one Microsoft Office productivity software features that can run through this series of steps each time she adds results of an assignment or a test into her document.
A. Template
B. Wizard
C. Chart
D. Macro

13. Machinery that performs a repetitive series of specific tasks in an exact amount of time requires _____.
A. mobile operating system
B. mainframe operating system
C. Real-Time Operating System
D. Personal Computer operating system

Continued...

14. Every mouse click creates a(an)_____ in the mouse to which the OS responds.
    A. event
    B. virtual memory
    C. overclock
    D. defragmented file

15. Operating System will clear the items from _____ when processor no longer needs them.
    A. video card
    B. RAM
    C. external hard disk
    D. ROM

16. Which of the following boot process ensures that essential peripheral devices are attached and operational?
    A. Step 1: Activating BIOS.
    B. Step 2: Performing the Power-On Self-Test.
    C. Step 3: Loading the OS into RAM.
    D. Step 4: Checking Further Configurations and Customizations.

17. Which of the following are the TWO units in a CPU?
    i. Control Unit
    ii. Graphic Processing Unit
    iii. Arithmetic Logic Unit
    iv. Virtual memory

    A. i and ii
    B. ii and iii
    C. i and iii
    D. ii and iv

18. Which of the followings contribute to the hard disk access time?
    i. Seek time
    ii. Latency
    iii. Clock speed
    iv. Processor core

    A. i and ii
    B. ii and iii
    C. i and iii
    D. ii and iv

19. _____ allows two different programs to be processed at one time, but they're sharing the computing resources of the chip.
    A. Swapping files
    B. Virtual memory
    C. Interrupt handler
    D. Hyperthreading

20. Which of the following storage has the fastest access time to Control Processing Unit (CPU)?
    A. Level 1 cache
    B. Level 2 cache
    C. CPU registers
    D. Solid State Drive (SSD)

Continued...

21. Network architecture is classified according to the following characteristics:
    i. The distance between their nodes.
    ii. The way in which they are managed (or administered).
    iii. The set of rules (or protocol) used to exchange data between network nodes.
    iv. The communications medium used to transport the data.
    A. i and ii
    B. i, ii, and iii
    C. ii, iii, and iv
    D. All of the above.

22. A network in a computer lab at school is using _____.
    A. Wide Area Network (WAN)
    B. Metropolitan Area Network (MAN)
    C. Home Area Network (HAN)
    D. Local Area Network (LAN)

23. A peer-to-peer (P2P) network is managed by _____.
    A. central administration
    B. local administration
    C. server administration
    D. None of the above.

24. Electronic data transmission standard for wired Ethernet networks is _____.
    A. 802.11
    B. 802.3
    C. 802.12
    D. 802.23

25. VoIP is a phone service that _____.
    A. has extremely high quality but is very expensive
    B. is only available for calls within Malaysia
    C. works over an Internet connection
    D. requires a fibre-optic connection

26. The operating system of your cell phone _____.
    A. is a version of Android if you are using an iPhone
    B. is stored on the ROM in the phone
    C. can be iOS and Android at the same time.
    D. None of the above

27. _____ is an operating system created by Google for use on mobile devices.
    A. iOS
    B. Android
    C. Window 10
    D. WebOS

28. When using a cell phone, a base transceiver station picks up a request for service and then passes the request to a central location called a _____.
    A. satellites
    B. transponders
    C. mobile switching center
    D. cellular network

Continued...

29. _____ is a type of malware that downloads onto your computer and tries to convince you that your computer is infected with a virus.
A. A keylogger
B. A zombie
C. Scareware
D. A worm

30. Which of the following statement about computer threats is **TRUE**?
A. Phishing lures Internet users to reveal personal information that could possibly lead to identity theft.
B. A surge protector is a software, similar to a firewall, that helps protect your computer from electrical surges.
C. A black-hat hacker will break into a system to flaunt their expertise to the administrator of the system they penetrated.
D. Cookies pose a severe security threat to a computer system.

31. _____ changes its own code or periodically rewrites itself to avoid detection.
A. Multipartite virus
B. Polymorphic virus
C. Stealth virus
D. Worm

32. An attack that renders a computer unable to respond to legitimate users because it is being bombarded with data requests is known as a _____ attack.
A. scareware
B. stealth
C. time bomb
D. denial-of-service

33. _____ is a term used to describe the ever-changing set of requests from clients for additional system features.
A. Scope creep
B. Procedure
C. Flowchart
D. Data-flow diagram

34.

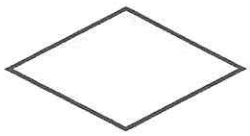

Figure 1.0: *Flowchart symbol*

Figure 1.0 above is one of the flowchart symbols that represents _____ .
A. binary decision
B. process
C. input/ output data
D. program terminated

35. Top-down design in programming is a systematic approach in which a problem is broken into a series of _____ tasks.
A. repetitive
B. direct-path
C. high-level
D. low-level

Continued...

36. Which of the following programming language allows programmers to build applications without specifying an algorithm?

A. SQL
B. PROLOG
C. FORTRAN
D. Java

37. Which of the followings are the main operations of a Database management system (DBMS)?

i. Creating databases and entering data
ii. Viewing and sorting data
iii. Querying data
iv. Outputting data

A. i and ii
B. i, ii, and iii
C. ii, iii, and iv
D. All of the above.

38. What is the **CORRECT** order of creating data table in a database?

i. Define the data type
ii. Set a maximum field size
iii. Input unique field names
iv. Set a default value if necessary

A. i, ii, iii, and iv
B. ii, i, iv, and iii
C. i, iv, iii, and ii
D. iii, i, ii, and iv

39. The *PNG* file is to be stored in fields. Which of the following is the **CORRECT** data type to be used that help to prevent wrong input from being entered into the field?

A. Number and Currency
B. OLE Object
C. Short text
D. Long text

40. *"Each student is assigned a room."*

The above condition is referring to:

A. one-to-many relationship
B. one-to-none relationship
C. one-to-one relationship
D. many-to-many relationship

Continued...

Section B: Structured Questions (Total: 60 Marks)

*Instruction: Please write your answers in the **Answer Booklet** provided.*

QUESTION 1 [20 marks]

a) Central Processing Unit (CPU) plays an important role in a computer.
   i. What is the function of CPU? (2 marks)
   ii. What is the measurement unit for CPU? (1 mark)
   iii. What are the **THREE** factors that affect the performance of CPU? (3 marks)

b) List **FOUR** components that you may find on the motherboard. (4 marks)

c) Jessica wants to do a research regarding recycling for her project. Give **THREE** guidelines to help her to decide whether to consider a website to be a good source of information. (6 marks)

d) Define the following terms:
   i. Application software (2 marks)
   ii. System software (2 marks)

QUESTION 2 [20 marks]

a) Discuss **THREE** types of user interface provided by operating system that let you to interact with computer. (6 marks)

b) Discuss **TWO** disadvantages of overclocking CPU of a computer. (4 marks)

c) Discuss the differences between RAM and ROM. (4 marks)

d) Discuss the **THREE** level of cache memory by their proximity to the CPU. (6 marks)

QUESTION 3 [20 marks]

a) Explain how information can be synched between devices using either wired or wireless techniques. (4 marks)

Continued...

b) Angela has been promoted to become the marketing manager in her company. She requested you to suggest a computer that fits her needs. Sometimes she has to meet her clients and do presentation at client's workplace.

i. What type of computers would you recommend her? (1 mark)

ii. Give **THREE** reasons for the above recommendation. (3 marks)

c) Provide **FOUR** guidelines on how to avoid phishing scams. (8 marks)

d) It is important for us to back up our files in computer. Briefly explain the difference between incremental backup and image backup. (4 marks)

End of Page.